



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
-----------------	-------------	----------------------	---------------------	------------------

10/625,197

07/22/2003

Christoph Egger

TRG-314

1266

7590

12/21/2005

LORUSSO LOUD & KELLY LLP.
15 RYE STREET, SUITE 312
PEASE INTERNATIONAL TRADEPORT
PORTSMOUTH, NH 03801

EXAMINER

QUARTERMAN, KEVIN J

ART UNIT

PAPER NUMBER

2879

DATE MAILED: 12/21/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/625,197

Applicant(s)

EGGER ET AL.

Examiner

Kevin Quarterman

Art Unit

2879

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 26 October 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-3,5-12 and 15 is/are pending in the application.
- 4a) Of the above claim(s) 13 and 14 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-3,5-12 and 15 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 22 July 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Response to Amendment

1. Applicant's amendment and remarks received 26 October 2005 have been entered and overcome the objections to the specification.

Claim Rejections - 35 USC § 112

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

3. Claims 1-3, 5-12, and 15 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.
4. Independent claim 1, now amended, recites a limitation that the sealing ring rests against the insulator body *externally* at the end of the insulator body. Previously, the claim recites the center electrode being sealed off from the insulator body by the sealing ring, which suggests that the sealing ring is positioned between the insulator body and the center electrode. Thus, it is unclear how the sealing ring could be positioned against the insulator body *externally* while sealing off the center electrode from the insulator body. Due to their dependency upon independent claim 1, claims 2-3, 5-12, and 15 are also indefinite.

Claim Rejections - 35 USC § 102

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

6. Claims 1-3, 5-12, and 15 are rejected under 35 U.S.C. 102(b) as being anticipated by Podiak (US 4,193,012).
7. Regarding independent claim 1, Figure 1 of Podiak shows a spark plug with an insulating body (13) and a center electrode (14), wherein the center electrode is housed at least partly in a bore (17) in the insulator body, the center electrode being sealed off from the insulating body by at least one sealing ring (15, 25) surrounding the center electrode, the sealing ring comprising material that is plastically deformable by compression (col. 3, ln. 40-47), wherein another sealing ring (25) rests against the insulator body externally at the end of the insulator body, which in the fitted position of the spark plug, points to a combustion chamber of an internal combustion engine (claim 3).
8. Regarding claim 2, Podiak discloses the sealing ring comprising at least one metal or one alloy of metals (col. 3, ln. 40-47).
9. Regarding claim 3, Podiak discloses the sealing ring comprising a metal selected from the group formed from soft irons and copper and nickel and high-grade steel, or aluminum materials or alloys of these materials (col. 3, ln. 40-47).
10. Regarding claim 5, Figure 1 of Podiak further shows the sealing ring resting against the insulator body in a recess (not labeled) of same partially covering the sealing ring.

Art Unit: 2879

11. Regarding claim 6, Figure 1 of Podiak shows a center electrode carrier (not labeled) on the end of the center electrode, which in the fitted position, points to a combustion chamber of an internal combustion engine (claim 3), and wherein the sealing ring is arranged or clamped between the center electrode carrier and the insulator body.

12. Regarding claim 7, Figure 1 of Podiak shows an attachment ring (23) on the end of the center electrode, which in the fitted position, points to a combustion chamber of an internal combustion engine, and wherein the sealing ring is arranged or clamped between the attachment ring and the insulator body.

13. Regarding claim 8, the method of welding the center electrode carrier to the center electrode is not germane to the issue of patentability of the device itself (MPEP § 2113). Thus, the welding methods have not been given patentable weight.

14. Regarding claim 9, Figure 1 of Podiak shows the center electrode comprising an area of enlarged diameter outside the insulator body at its end, which in the fitted position of the spark plug, points to the combustion chamber of an internal combustion engine and the sealing ring is arranged or clamped between the area with enlarged diameter and the insulator body.

15. Regarding claim 10, Figure 1 of Podiak also shows the sealing ring (25) arranged or clamped inside the insulator body between a shoulder of the insulator body, surrounding the center electrode and an area of enlarged diameter of the center electrode.

16. Regarding claim 11, Podiak discloses that the insulator body is a ceramic insulator body (col. 2, ln. 46).

17. Regarding claim 12, Figure 1 of Podiak shows the center electrode sealed off from the insulator body exclusively by at least one sealing ring surrounding the center electrode.

18. Regarding claim 15, the method of welding the attachment ring to the center electrode is not germane to the issue of patentability of the device itself (MPEP § 2113). Thus, the welding methods have not been given patentable weight.

Response to Arguments

19. Applicant's arguments received 26 October 2005 have been fully considered but they are not persuasive.

20. In response to applicant's argument that the silicon-talc sealing material of Podiak is not plastically deformable by compression, the Examiner notes that Podiak discloses a sealing material of aluminum material, which is one of the materials disclosed by applicant as being one that is plastically deformable by compression. Therefore, the Examiner holds that Podiak does indeed teach a material (aluminum material) that is plastically deformable by compression as claimed in the instant application.

21. In response to applicant's argument that Podiak does not teach the sealing ring resting against the insulator body as claimed, the Examiner notes that Figure 1 of Podiak clearly shows a sealing ring (25) resting against the insulator body (13) externally, in addition to the sealing ring (15) resting against the insulator body

internally. Therefore, the Examiner holds that Podiak does indeed teach the sealing ring resting against the insulator body externally (also internally) as claimed in the instant application.

22. In response to applicant's argument that Podiak does not disclose that high compressive stress can be imparted to a spark plug, the Examiner notes that something that is old does not become patentable upon the discovery of a new property (MPEP § 2112 I).

Conclusion

23. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

24. A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

Contact Information


Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kevin Quarterman whose telephone number is (571) 272-2461. The examiner can normally be reached on M-TH (7-5:30).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nimesh Patel can be reached on (571) 272-2457. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Kevin Quarterman
Examiner
Art Unit 2879

kq 
18 December 2005


Joseph Williams
Primary Examiner
Art Unit 2879